

Fig. 1(a) Prior Art

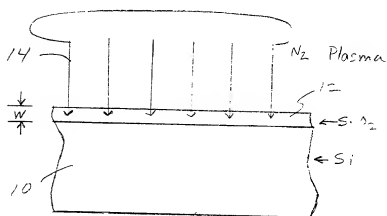


Fig. 1(b) Prior Art

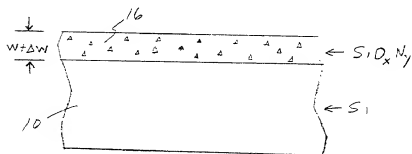


Fig. 1(c) Prior Art

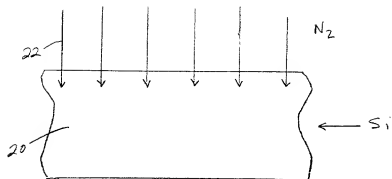


Fig. 2(a)

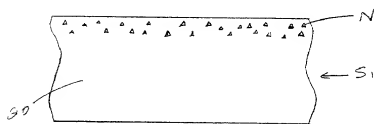


Fig. 2(b)

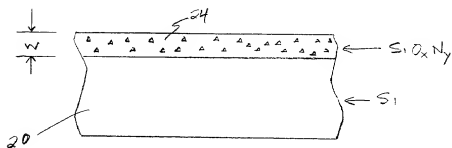


Fig. 2(c)

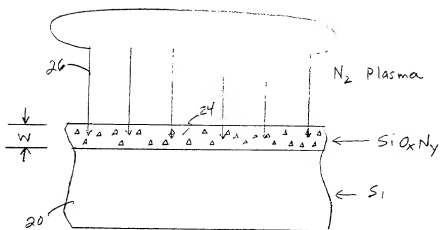


Fig. 2 (d)

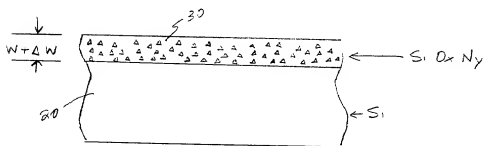


Fig 2 (e)

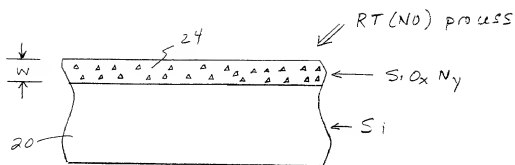


Fig. 3(a)

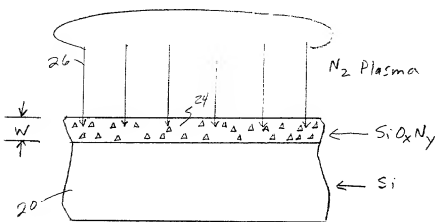


Fig. 3(b)

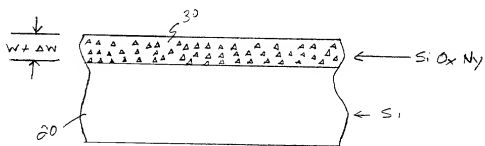


Fig. 3(c)

$\text{SiO}_2$  only

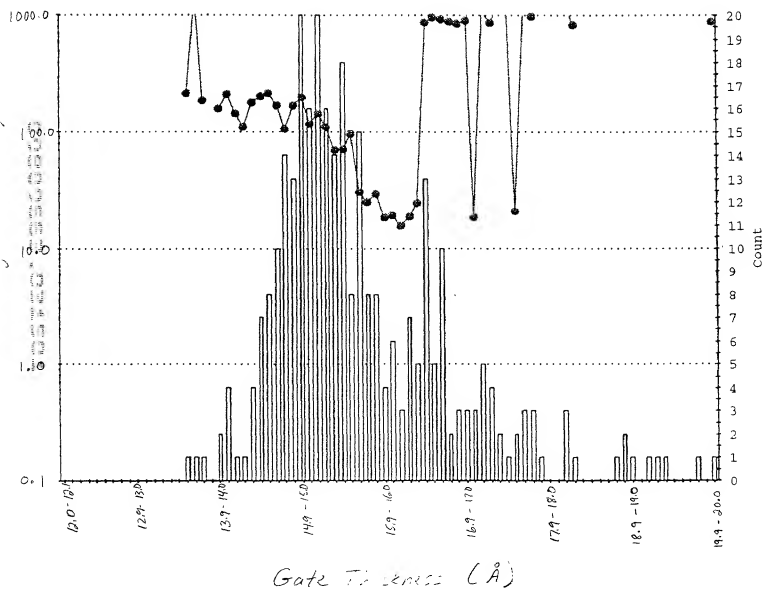


Fig. 4

$\text{SiO}_2 + \text{RPN}$   
(Prior  $\text{Ar}^+$ )

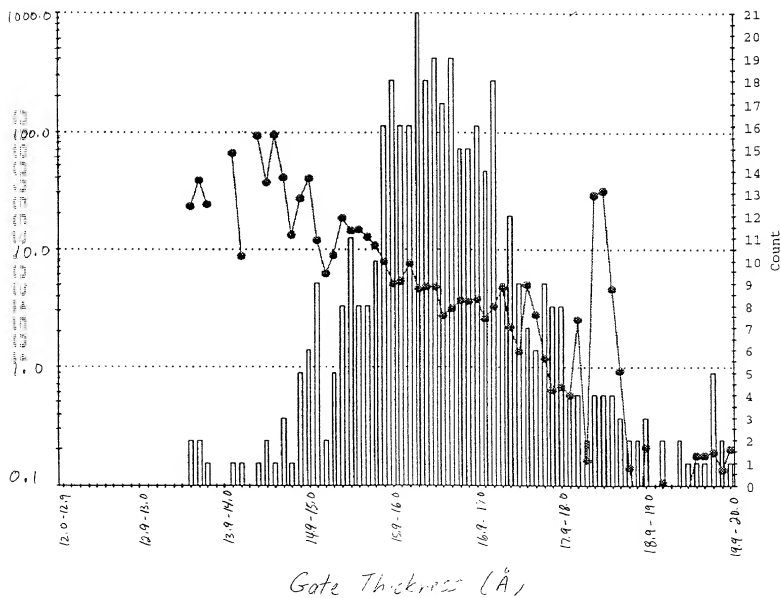


Fig. 5

$\text{SiO}_x\text{N}_y + \text{RPN}$

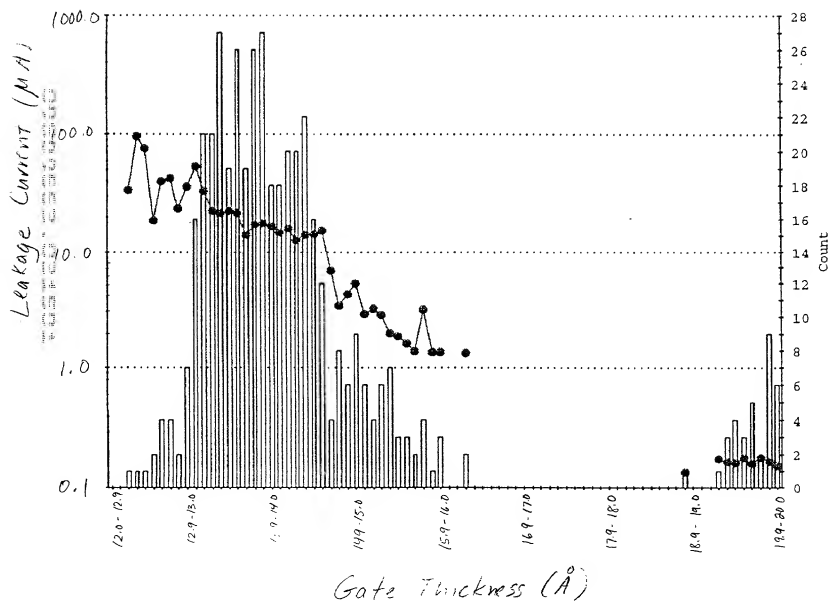


Fig. 6

### Uniformity of Gate Film

|                                  | <u>Mean Thickness (nm)</u> | <u><math>\sigma</math></u> |
|----------------------------------|----------------------------|----------------------------|
| RPN of $\text{SiO}_2$ (Dry)      | 1.74                       | 0.287                      |
| RPN of $\text{SiO}_2$ (Wet)      | 1.68                       | 0.115                      |
| RTNO                             | 1.70                       | 0.0293                     |
| RTNO + RPN @ $550^\circ\text{C}$ | 1.74                       | 0.0246                     |
| RTNO + RPN @ $750^\circ\text{C}$ | 1.73                       | 0.0296                     |

Fig. 7

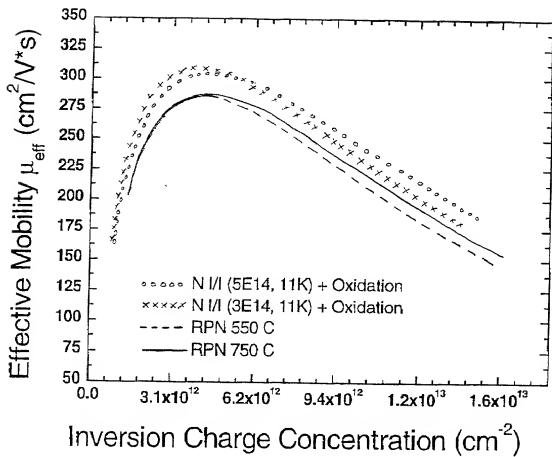


Figure 8